Remove Duplicate Letters

Given a string `s`, remove duplicate letters so that every letter appears once and only once. You must make sure your result is **the smallest in lexicographical order** among all possible results.

Example 1:

```
Input: s = "bcabc"

Output: "abc"
```

Example 2:

```
Input: s = "cbacdcbc"

Output: "acdb"
```

Constraints:

- $1 <= s.length <= 10^4$
- `s` consists of lowercase English letters.